

REMARKS

Claims 1, 2 and 4-20 are pending in the present application. Claims 15-20 are withdrawn.
Claim 1 is herein amended. Support for the amendment is set forth below.

Applicants' Response to Claim Rejections under 35 U.S.C. §112:

Claim 1 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action maintains that it is unclear which element forms wires of second uniform pitch as recited in the claim. In response thereto, applicants have amended the claim so as to clarify that the wiring layer has branches above the capacitor. In light of the amendment applicants respectfully request favorable reconsideration.

Applicants' Response to Claim Rejections under 35 U.S.C. §103(a)

Claims 1-2, 4-6, 8-10 and 13-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over **Chakravorty**, US patent No. 6,611,419 in view of **Gnadinger**, US patent No. 5,229,647. In response thereto applicants have amended the claims to more specifically state the subject matter regarded as the invention. Specifically, applicants have clarified that the through holes of the current invention are straight.

The Examiner contends that **Chakravorty** teaches in Figs. 2 and 3 a wiring layer 322 formed on the support substrate, having branches (bent portion of 322) above the upper electrode 326. **Chakravorty** discloses a multilayer ceramic substrate 310 containing capacitors and

wirings. Fig. 3 illustrates ceramic plates above and below the capacitors 330 with the lower ceramic plate as a support substrate. Conductor paths indicated by 324 and 325 are bent in the lower ceramic plate and the upper ceramic plate also has bent conductor paths 321 and 322. Applicants respectfully submit that these bends do not constitute branches in light of the amendment to claim 1. The amendment to claim 1 requires that the through holes are straight. Further, applicants note that ground wires Vss has branches at the upper electrode but not above the upper electrode. Therefore, the through holes of **Chakravorty** filled with conductor 323 do not have branches above the upper electrode.

Additionally, applicants submit that **Chakravorty** does not teach the limitation of uniform pitch above the capacitor, which is narrower than the uniform pitch below the capacitor. **Chakravorty's** fig. 3 discloses that wiring 301 to 323 to 324 to 334 is bent to vary the pitch. Hence, there is also shown narrow pitches on the lower circuit board for some but not all the wiring. Therefore, there is no uniformity in the pitch either above or below the capacitor.

Further, the Office Action admits that **Chakravorty** does not teach a support substrate made of a semiconductor substrate. The Action cites to **Gnadinger** and refers to the description in **Chakravorty** that substrates 210/310 can be of any type. The Office Action contends that **Gnadinger** teaches the use of a semiconductor substrate as a support in the structure of forming an interconnect structure, and concludes that it would have been obvious to incorporate the semiconductor substrate taught by **Gnadinger** in the structure of **Chakravorty**. Applicants respectfully submit that one of skill in the art would not be motivated to make the combination.

Although **Chakravorty** describes in column 4, lines 23-25 that die and substrate can be of any type, the teaching on substrate is limited only to multilayer ceramic substrate. Fig. 6 discloses the fabrication method of the multilayer ceramic substrate of **Chakravorty**. Specifically, Block 603 states: "form within a multiplayer ceramic substrate at least one capacitor". A capacitor formed on a support substrate made of a semiconductor substrate is not taught.

Gnadinger teaches a solid state memory unit constructed by stacked wafers containing a large number of memory units, but never teaches the use of a semiconductor substrate as a support substrate. See Abstract.

Applicants respectfully submit that one of skill in the art is not motivated to combine that multilayer ceramic substrate containing at least one capacitor of **Chakravorty** with a stacked semiconductor memory as taught by **Gnadinger**. The manufacturing processes of the ceramic substrate and the semiconductor substrate are completely different and neither reference provides sufficient teaching to utilize the others' material.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date. Further, applicants submit that no additional search is warranted and request entry of the amendments to claim 1.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

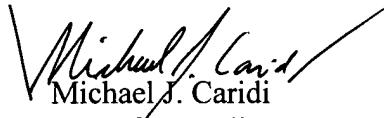
Application No. 10/092,525
Attorney Docket No. 020214

Amendment under 37 C.F.R. §1.116
Amendment Filed: March 28, 2006

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP


Michael J. Caridi
Attorney for Applicants
Registration No. 56,171
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

MJC/mra